

WHAT IS CLAIMED IS:

1. A method used in equalization processing, comprising the steps of:

5 extracting information on fluctuation of transmission line characteristics which fluctuate periodically on the basis of a receive signal; and performing equalization processing while switching equalization characteristics in accordance with said fluctuation of transmission line characteristics.

15 2. The method as claimed in claim 1, said step of extracting said information comprising the steps of:
receiving a reference signal which is sent from a send side; and
20 detecting a change point of said transmission line characteristics by using fluctuation of phase or amplitude of said reference signal.

25 3. The method as claimed in claim 2, said method further comprising the steps of:
30 extracting a basic frequency signal of fluctuation period of said transmission line characteristics;
vectorizing said basic frequency signal into a vector;
35 adjusting phases of change point vectors corresponding to two change points such that said

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phases become symmetrical with respect to a reference phase;

comparing a component of said vector of said basic frequency signal with a reference value;

5 and

outputting a switching signal for switching said equalization characteristics according to a result of said step of comparing.

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4. The method as claimed in claim 3, said method further comprising the steps of:

15 performing equalization processing for each interval of said fluctuation of transmission line characteristics on each corresponding receive signal;

20 comparing errors of said each corresponding receive signal on which said equalization processing has been performed; and updating said reference value on the basis of a result of said step of comparing errors.

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5. An equalization processing apparatus comprising:

30 a part extracting information on fluctuation of transmission line characteristics which fluctuate periodically on the basis of a receive signal; and

35 a part performing equalization processing while switching equalization characteristics in accordance with said fluctuation of transmission line characteristics.

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10 a part receiving a reference signal which
is sent from a send side; and
 a part detecting a change point of said
transmission line characteristics by using
fluctuation of phase or amplitude of said reference
signal.

7. The equalization processing apparatus
as claimed in claim 6, further comprising:
20 a part extracting a basic frequency signal
of fluctuation period of said transmission line
characteristics;

a part comparing a component of said
30 vector of said basic frequency signal with a
reference value; and

a part outputting a switching signal used for switching said equalization characteristics according to a result of comparing said component

35 with said reference value.

8. The equalization processing apparatus as claimed in claim 7, further comprising:

5 a part performing equalization processing for each interval of said fluctuation of transmission line characteristics on each corresponding receive signal;

10 a part comparing errors of said each corresponding receive signal on which said equalization processing has been performed; and

 a part updating said reference value on the basis of a result of comparing said errors.

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9. The equalization processing apparatus as claimed in claim 5, further comprising:

20 a plurality of equalization processing parts each corresponding different transmission line characteristics; and

 a part switching said equalization processing parts in accordance with fluctuation of
25 said transmission line characteristics.

30 10. The equalization processing apparatus as claimed in claim 5, further comprising:

 a part holding equalization processing parameters for different transmission line characteristics; and

35 a part setting said equalization processing parameters corresponding to specific transmission line characteristics in accordance with

FOOTNOTES

said fluctuation of said transmission line characteristics.

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FOOTNOTES